

REMARKS

Responsive to the action mailed March 18, 2003, Applicant confirms the election of the claims of Group I, directed to an apparatus for strata relocation. Applicant removes the traverse of the election.

Claims 1-28 were previously pending. Claims 1-17 were rejected and claims 18-28 were withdrawn by the Examiner as being directed to a non-elected invention. In response, Applicant amends claim 1, cancels claims 18-28, and adds new claims 29-41.

Claims 1-4, 12-14, and 17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Brouwer et al., U.S. Patent No. 5,979,088 ('088 patent) in view of Robertson et al., U.S. Patent No. 5,155,928 ('928 patent).

Applicant's claims are distinct for at least the following reason. Because the '088 is designed for use in "sucking up material from the bed of a body of water" ('088 patent, 1:10-12) rather than relocating subsurface strata, the suction pipe "is fixed in to the jacket pipe, specifically at its top by means of partition 19, and at its bottom by means of chamber 20." As amended, claim 1 includes the limitation "slurry outlet piping substantially disposed within the casing and positionable independently of the casing." Neither the '088 patent nor the '928 patent disclose, teach or suggest this limitation. Therefore, claim 1 is allowable over the combination of '088 and '928 patents.

Claims 2-17 and new claims 29-40 depend directly or indirectly from claim 1 and include this limitation. Similarly, new claim 41 also recites this limitation. Therefore, these claims are also allowable over the '088 and '928 patents.

The dependent claims also contain additional limitations that further distinguish them from the '088 and '928 patents. For example, the '088 patent discloses "openings 25, which are provided with gratings, *in the jacket pipe 12*" (5:19-20) rather "slurry outlet piping further comprises a screen *positionable internally within or externally from a casing.*" (Claim 2).

Claims 5-11 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Brouwer et al., U.S. Patent No. 5,979,088 ('088 patent) in view of Robertson et al., U.S. Patent No. 5,155,928 ('928 patent) and in further view of Grable, U.S. Patent No. 4,497,519 ('519 patent).

Applicant's claims 5-11 are distinct for at least the following reasons. First, these claims depend on claim 1 and are allowable for the reasons discussed above. Second, the Examiner concedes that the '088 and '928 patent combination does not show separate casings for injecting water and removing slurry. (Office Action mailed 3/18/03, page 4). The '519 patent discloses a first duct 15 to deliver water (2:40-50) and a second duct 21 to retrieve water and suspended sediments (2:67-3:8). However, these ducts are not disposed within a casing (see '519, Fig. 1). The '088, '928, and '519 patents do not suggest all of the limitations of claims 5-11 and the Examiner has not presented any reasoning why one would be motivated to include these features. Hence these claims are allowable over this combination. Furthermore, disposition of the casings "at opposite ends of the apparatus" as recited in claim 5 allows "formation of a trench cavity. That is, a cavity that spans the distance between the two casings." (Specification, page 12). Because none of the cited patents disclose piping enclosed in two casings, disposed at opposite ends of the apparatus, these claims are allowable over the combination of references.

Claims 15 and 16 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Brouwer et al., U.S. Patent No. 5,979,088 ('088 patent) in view of Robertson et al., U.S. Patent No. 5,155,928 ('928 patent) and in further view of Ewig, U.S. Patent No. 1,750,095 ('095 patent).

Claim 15 as amended, calls for a conduit for transferring removed relocated strata. Claim 15 further recites that the conduit is coupled to the slurry outlet pipe and that the casing, water inlet and outlet pipe are arranged to remove strata from under a formation and relocate the removed strata over the formation. The Examiner concedes that the '088 and '928 patent combination does not show a sand sprinkler or a conduit for strata relocation. (Office Action mailed 3/18/03, page 5). The '095 patent discloses "openings *closed by sieves*, which . . . are connected with a connecting pipe h. (2:10-15). The sieves act to retain dredged soils within the dredger's hold rather than allow it to pass to connecting pipe h. (1:55-85). Connecting pipe h is used to transfer the liquid separated from the soil rather than providing "a conduit for transferring relocated strata" as recited in claim 15. Therefore, the combination of '088, '928, and '095 patents actually teaches away from the claimed invention in that the structure having openings that are closed by sieves connected with a connecting pipe h, with the sieves acting to retain dredged soils within the dredger's hold rather than allow it pass through the conduit for

transferring removed relocated strata that was removed from under a formation and relocate the removed strata over the formation. Since the references do not suggest all of the limitations of claims 15 and 16, claims 15 and 16 are allowable over this combination.

New claims 29-40 depend directly or indirectly on claim 1 and incorporate its limitations. Claims 29-31 are directed to specific embodiments of the casing. (See specification 5:27-31, 12:18-28). Claims 32 and 33 are directed to specific embodiments of the support. (See specification 4:22-23 and 5:8-10, see also 2:9-12). Claims 34-40 are directed to the apparatus with specific embodiments of the sand sprinkler. (See specification 7:10-9:2). New claim 41 is an independent claim that includes the limitation "slurry outlet piping substantially disposed within the casing and positionable independently of the casing" and combines other limitations found in the preceding claims. Claims 29-40 are allowable for at least the reasons discussed above. Furthermore, these claims do not add new matter.